IN THE CLAIMS

Please CANCEL claims 2 and 21, without prejudice or disclaimer.

Please AMEND the claims as follows:

For the convenience of the Examiner, all of the pending claims are reproduced below, in their current form, whether or not the claims are amended herein.

1. (THREE TIMES AMENDED) An apparatus for simulating phenomena of a combined particle formed of [individual] adsorbate particles and substrate particles, comprising:

a kinetic condition setting unit which sets information for defining a plurality of generation periods and a corresponding number of [individual] adsorbate particles to be generated during each generation period; and

a particle motion computing unit which generates the [individual] adsorbate particles in accordance with the information set by the kinetic condition setting unit and computes motion of the generated [individual] adsorbate particles, to simulate phenomena of the combined particle, each [individual] adsorbate particle having a corresponding emission source wherein

for each [individual] adsorbate particle, the kinetic condition setting unit sets a region indicating a position of the corresponding emission source, and

the particle motion computing unit generates each [individual] adsorbate particle in accordance with the position of the corresponding emission source.

3. (ONCE AMENDED) An apparatus as in claim 1, wherein

[the combined particle is formed of substrate particles and adsorbate particles, each said individual particle being an adsorbate particle, and,]

before generating the [individual] adsorbate particles, the particle motion computing unit generates the substrate particles.

4. (NOT AMENDED) An apparatus as in claim 1, further comprising:

a display which allows a user to enter the information set by the kinetic condition setting unit.

5. (ONCE AMENDED) An apparatus as in claim 1, wherein

[the combined particle is formed of a first type of particle and a second type of particle, each of said individual particles being the first type of particle, and]

the kinetic condition setting unit sets information for generating the [second type of particle] substrate particles.

6. (TWICE AMENDED) An apparatus as in claim 1, wherein

each [individual] adsorbate particle is formed of [smaller particles] atoms;

the information set by the kinetic condition setting unit includes information indicating whether the [smaller particles] atoms of a respective [individual] adsorbate particle are static against a center of mass of the [individual] adsorbate particle; and

when the particle motion computing unit generates an [individual] adsorbate particle and the information set by the kinetic condition setting unit indicates that the [smaller particles] atoms of the respective [individual] adsorbate particle are not static against the center of mass, the particle motion computing unit provides a random orientation to the [smaller particles] atoms of the [individual] adsorbate particle.

7. (NOT AMENDED) An apparatus as in claim 6, further comprising:

a display which allows a user to enter the information set by the kinetic condition setting unit.

8. (TWICE AMENDED) An apparatus as in claim 1, wherein

each [individual] adsorbate particle is formed of [smaller particles] atoms;

the information set by the kinetic condition setting unit includes information indicating whether the [smaller particles] atoms of a respective [individual] adsorbate particle are static against a center of mass of the [individual] adsorbate particle; and

when the particle motion computing unit generates an [individual] adsorbate particle and the information set by the kinetic condition setting unit indicates that the [smaller particles] atoms of the respective [individual] adsorbate particle are not static against the center of mass, the particle motion computing unit provides an initial velocity to the [smaller particles] atoms of the [individual] adsorbate particle.

9. (TWICE AMENDED) An apparatus as in claim 1, wherein, when generating an [individual] adsorbate particle, the particle motion computing unit provides a random direction within a cone pointed at [the] a substrate and being centered at a point of generation of center of mass velocity of the [individual] adsorbate particle.

11. (NOT AMENDED) An apparatus as in claim 1, further comprising:

a display which displays the information set by the kinetic condition setting unit.

12. (ONCE AMENDED) An apparatus for simulating phenomena of a combined particle formed of [individual] adsorbate particles and substrate particles, each [individual] adsorbate particle having a corresponding emission source, the apparatus comprising:

an input device which allows a user to designate a region;

a kinetic condition setting unit which, for each [individual] adsorbate particle, sets the region designed by the user as a region indicating a position of the corresponding emission source; and

a particle motion computing unit which generates the [individual] adsorbate particles in accordance with the position of the corresponding emission source as indicated by the region designated by the user and computes motion of the generated [individual] adsorbate particles, to simulate phenomena of the combined particle.

13. (NOT AMENDED) An apparatus as in claim 12, wherein the input device is a display.

14. (NOT AMENDED) An apparatus as in claim 12, further comprising:

a display which displays the information set by the kinetic condition setting unit.

15. (ONCE AMENDED) An apparatus as in claim 14, wherein the display shows the [individual] adsorbate particles generated by the particle motion computing unit and indicates the motion computed by the particle motion computing unit.

16. (THREE TIMES AMENDED) An apparatus for simulating phenomena of a combined particle formed of [individual] adsorbate particles and substrate particles, each [individual] adsorbate particle having a corresponding emission source, the apparatus comprising:

a kinetic condition setting unit which sets information for defining kinetic conditions of the [individual] adsorbate particles; and

a particle motion computing unit which generates the [individual] adsorbate particles in accordance with the information set by the kinetic condition setting unit and the position of the corresponding emission source, and computes motion of the generated [individual] adsorbate particles, to simulate phenomena of the combined particle, each [individual] adsorbate particle having a corresponding emission source.

17. (ONCE AMENDED) An apparatus as in claim 16, wherein

[the combined particle is formed a first type of particle and a second type of particle,]

the [first type of particle] adsorbate particles move [moving] towards the substrate particles, [second type of particle, each of said individual particles being the first type of particle,]

the kinetic condition setting unit sets a region for defining an initial position of the [individual] adsorbate particles, and

the apparatus further comprises a display which displays the relationship between the region set by the kinetic condition setting unit and a region indicating a position of a [second type of] substrate particle forming the combined particle.

18. (ONCE AMENDED) An apparatus as in claim 17, wherein

the kinetic condition setting unit sets information for providing a direction of velocity to the [individual] adsorbate particles, and

the display shows the direction of velocity with respect to the region set by the kinetic condition setting unit and the region indicating the position of [the second type of] a respective substrate particle.

19. (NOT AMENDED) An apparatus as in claim 16, further comprising:

a display which displays the information set by the kinetic condition setting unit.

20. (THREE TIMES AMENDED) A computer-implemented method for simulating phenomena of a combined particle formed of [individual] adsorbate particles and substrate particles, each [individual] adsorbate particle having a corresponding emission source, the method comprising the steps of:

setting information for defining a plurality of generation periods and a corresponding number of [individual] adsorbate particles to be generated during each generation period;

generating the [individual] adsorbate particles in accordance with the information set in the setting step and the position of the corresponding emission sources;

computing motion of the generated [individual] adsorbate particles; and

simulating phenomena of the combined particle in accordance with the computed motion.

22. (THREE TIMES AMENDED) A computer-implemented method for simulating phenomena of a combined particle formed of [individual] adsorbate particles and substrate particles, each [individual] adsorbate particle having a corresponding emission source, the method comprising the steps of:

setting, for each [individual] adsorbate particle, a region indicating a position of the corresponding emission source;

generating the [individual] adsorbate particles in accordance with the position of the corresponding emission source as indicated by the region set in the setting step;

computing motion of the generated [individual] adsorbate particles; and

simulating phenomena of the combined particle in accordance with the computed motion.

23. (THREE TIMES AMENDED) An apparatus for simulating phenomena of a combined particle formed of [individual] adsorbate particles and substrate particles, each [individual] adsorbate particle having a corresponding emission source, the apparatus comprising:

setting information for defining kinetic conditions of the [individual] adsorbate particles;

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displaying the set information;

generating the [individual] adsorbate particles in accordance with the set information and the positions of the corresponding emission sources; and

computing motion of the generated [individual] adsorbate particles, to simulate phenomena of the combined particle, each [individual] adsorbate particle having a corresponding emission source.

24. (THREE TIMES AMENDED) An apparatus for simulating phenomena of a combined particle formed [of substrate particles and] with adsorbate particles, comprising:

a kinetic condition setting unit which sets information for defining kinetic conditions of the adsorbate particles; and

a particle motion computing unit which generates the adsorbate particles in accordance with the information set by the kinetic condition setting unit and computes motion of the generated adsorbate particles, to simulate phenomena of the combined particle, each adsorbate particle having a corresponding emission source, wherein

for each adsorbate particle, the kinetic condition setting unit sets a region indicating a position of the corresponding emission source, and

the particle motion computing unit generates each adsorbate particle in accordance with the position of the corresponding emission source as indicated by the region set by the kinetic condition setting unit.

25. (NOT AMENDED) An apparatus as in claim 24, wherein the information set by the kinetic condition setting unit defines a plurality of generation periods and a corresponding number of adsorbate particles to be generated during each generation period by the particle motion computing unit.

26. (ONCE AMENDED) An apparatus as in claim 24, wherein

the combined particle is formed with adsorbate particles and substrate particles,

the information set by the kinetic condition setting unit includes information for defining kinetic conditions of the substrate particles,[;] and

the particle motion computing unit generates the substrate particles before generating the adsorbate particles.

27. (ONCE AMENDED) An apparatus as in claim 24, wherein

the combined particle is formed with adsorbate particles and substrate particles,

each substrate particle includes a fixed particle and[,] a temperature control particle [and a free particle],

the information set by the kinetic condition setting unit includes information for defining kinetic conditions of the fixed particle[,] and the temperature control particle [and the free particle of each substrate particle], and

the particle motion computing unit generates the fixed particle[,] and the temperature control particle [and the free particle] of each substrate particle in accordance with the information set by the kinetic condition setting unit.

28. (NOT AMENDED) An apparatus as in claim 24, further comprising:

a display which displays the information set by the kinetic condition setting unit.

29. (TWICE AMENDED) An apparatus as in claim 24, wherein

each adsorbate particle includes a plurality of [smaller particles] atoms;

the information set by the kinetic condition setting unit includes information indicating whether the [smaller particles] atoms of a respective adsorbate particle are static against a center of mass of the adsorbate particle; and

when the particle motion computing unit generates an adsorbate particle and the information set by the kinetic condition setting unit indicates that the [smaller particles] atoms of the respective adsorbate particle are not static against the center of mass, the particle motion computing unit provides a random orientation to the [smaller particles] atoms of the adsorbate particle.

30. (ONCE AMENDED) An apparatus as in claim 29, wherein, when the particle motion computing unit generates an adsorbate particle and the information set by the kinetic condition setting unit indicates that the [smaller particles] atoms of the respective adsorbate particle are not fixed against center of mass, the particle motion computing unit provides an initial velocity to the [smaller particles] atoms of the adsorbate particle.

31. (TWICE AMENDED) An apparatus as in claim 24, wherein, when generating an adsorbate particle, the particle motion computing unit provides a random direction within a cone pointed at [the] a substrate and being centered at a point of generation of center of mass velocity of the adsorbate particle.